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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,947	01/07/2004	Stephen B. Siegel	6987-90135	5528

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EXAMINER	
PADGETT, MARIANNE L	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/753,947	SIEGEL, STEPHEN B.	
	Examiner	Art Unit	
	Marianne L. Padgett	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/14/05 & 3/11/05*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7,11,13,16,18-20,22,27,28,31-33 and 37-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7,11,13,16,18-20,22,27,28,31-33 and 37-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/11/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1). The terminal Disclaimers over copending Application No. 10/386,980, 10/339,264 & 10/789,020, have removes the obviousness double patenting rejections of sections 3, 4 & 8 of the action mailed 2/17/05. Cancellation of claim 34 removes the 102 rejection thereover. 112 2nd rejections of the action mailed 2/17/05 have been removed by amendment, but new ones have been introduced

2). Claims *1-4,7,11,13,16,18-20,22,27,28,31-33 and 37-39* are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amendments reciting first & second arrays of first & second wavelengths all on same panel are of unclear scope, in that it is uncertain if these arrays are necessarily in separate blocks on the panel of if they can be intermixed so as to form an overall block with the 2 arrays intermeshed. Applicant cited no support for this set of new limitations, but the claim language would seem to imply the former with single wavelength blocks as arrays, for which no support was found, while configurations as in figure 10, could be said to read on the latter. Clarification &/or citation of support is needed. Especially see claims 1 & 16.

Use of relative terms that lack clear metes and bounds in the claims, or in provided definitions in the specification or cited prior art, is vague and indefinite. The term "uniform" is relative & it is unclear how the "uniformly and concurrently applying..." is made uniform for an object that can be any shape or configuration or bulk material, especially as the concurrently implies all areas of this unspecified shape must be treated simultaneously. For relatively planar coatings or layers on a specific surface going past on a conveyor or web, the context might be considered sufficient to define limits on uniform, but not for the breath claimed. How uniform application & distribution of 2 potentially separated arrays of wavelengths can occur concurrently as claimed is also uncertain.

Note independent claims 31 & 32 should also techniquely define LED, as done in 1 & 16.

3.) Claims *1-4,7,11,13,16,18-20,22,27,28,31-33 and 37-39* are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Support for the breath of possible meanings for "uniformly applying..." & the like is not clear, since as claimed treatment of any shape of article with ALL its surfaces (bottom, top, interior, etc) is included by new claim language, but clear enablement for this breath was not found, hence as written it appears to include New Matter in its scope. Support for the new descriptions of possible meanings the arrays is also potentially New Matter.

4). The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5). Claims 1-4, 11, 13, 16, 18-2 & 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young (6,561,640 B1) or Biegelsen et al (6,536,889 B1), optionally in view of Dowling et al (2002/0074559 A1), as applied in section 6 of the action mailed 2/17/05.

Note due to support/clarity problems the amendments do not significantly effect array discussions as applied to these references, however as 2 stage curing using different sets of wavelengths is a teaching of the primary references, successive arrays of different wavelengths are taught, were it would have been obvious to one of ordinary skill in the art to place them on the same or different panels, depending on desired length of the cure times for each stage & if any wait between stages was desirable, which would depend on individual materials being treated. Even distribution resulting in uniform curing of articles being treated would remain an expectation of the competent engineer, for reasons as previously discussed.

6). Claims 7, 22, 31-33 & 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young or Biegelsen et al, in view of Dowling et al (optional) as applied to claims 1-6, 11-21, 26-30 and 35-39 above, and further in view of Ostler et al (2001/0046652 A1) or Contois et al (4,980,701 A) or Kennedy et al (5,634,711 A), as discussed in section 7 of the action mailed 2/17/05.

It is noted that use of fans or heat sinks that require action such as cooling fluids (air), would have been expected by one of ordinary skill in the art to employ a means of monitoring or sensing the temperature inorder to perform standard temperature control functions, which conventional concept would have been applicable to any of the ternary references.

7). The reference to Speakman (GB 2,350,321A) cited in the IDS is of interest as cumulative to the primary references, and optional secondary reference for a mechanism for moving rotating the LED arrays in analogous uses. Speakman (abstract, figures 7, 8, 11, 15, 16 and 22) teach patterned deposition of radiation curable material, that may be UV cured, and the curing may be via area arrays of LED's (page 3 and 5), where fig. 7 (p.21+) may house LED arrays on an angular rotation unit, where there is also relative movement between the substrate and curing/printing unit, separate from angular rotation of the LED arrays, where curing may be during or after deposition. It is noted that it would have been obvious to one of ordinary skill to employ mechanisms, such as those of Speakman in the teachings of

Young or Biegelsen et al, as they are performing analogous processes with analogous curing means, but do not provide any details of how the LED arrays of curing sources are controlled. Speakman provides such a means, which would have been applicable to these primary references, especially considering their figures, such as fig.3, which show similar associations of printing means and curing means. Angular rotation as taught by Speakman, would have caused orbital, circular, annular or elliptical motion, where since it is taught to produce "whole irradiation area sweep backwards and forwards..." (fig.7) the particular shape would have been expected to have been optimized for the particular area being irradiated.

8). Applicant's arguments filed 6/14/05 & discussed above have been fully considered but they are not persuasive.

9). Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10). Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks, can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLP 9/6/05

MARIANNE PADGETT
PRIMARY EXAMINER